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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,887	11/26/2003	Thomas M. Laney	87430CPK	1673

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EXAMINER

BUTLER, PATRICK NEAL

ART UNIT	PAPER NUMBER
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1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/722,887	Applicant(s) LANEY ET AL.	
	Examiner Patrick Butler	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19,21,23-26 and 29-40 is/are pending in the application.
- 4a) Of the above claim(s) 31-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19,21,23-26,29,30 and 40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19, 21, 23-26, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al. (US Patent No. 5,405,887).

With respect to Claims 19 and 40, Morita teaches a method of making a porous film by adding from 40-250 parts finely-powdered filler to 100 parts polylactic acid-based resin composition and melting (blending void initiating particles into a melt comprising a polylactic-acid-based material wherein the void initiating particles are employed in an amount of 30-50% by volume in feedstock) (see Abstract). The blend is melt-extruded through a flat die to form an extrudate (extruding the polylactic-acid-based materials as a monolayer film to form a sheet comprising a layer of a polylactic-acid-based material containing inorganic particles) (see col. 7, lines 7-27). Morita teaches stretching biaxially from 1.1 to 10 times (see col. 7, lines 28-32) and teaches, more specifically, stretching 3 times in one direction and 3 times in another direction (see Table 4, Example 3). The biaxial drawing ratio of Claim 19 of greater than 3 times and not more than 5 times and the biaxial drawing ratio of Claim 40 of greater than 3.3 times and not more than 5 times are obvious over Morita because the claimed ranges lie inside ranges disclosed by the prior art (see MPEP § 2144.05(I)). Moreover, biaxial drawing

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ratios of Claim 19 and 40 are obvious because their lower range of greater than 3 and 3.3, respectively, and Morita's disclosed teaching of stretching 3 times in one direction and 3 times in another direction are close enough that one skilled in the art would have expected them to have the same properties (see MPEP § 2144.05(I)). Morita's stretching ranges recited above of from 1.1 to 10 times (see col. 7, lines 28-32) and stretching 3 times in one direction and 3 times in another direction (see Table 4, Example 3) would necessarily cause the area ratio between the non-stretched sheet and the biaxially stretched film to be in the range of 1.2 to 100 and 9, respectively. Similar to the obviousness of the claimed biaxial drawing ratio, the area ratio of Claim 19 of greater than 10 times and not more than 20 times and the biaxial drawing ratio of Claim 40 of at least about 11 times and not more than 20 times are obvious over Morita because the claimed ranges lie inside ranges disclosed by the prior art (see MPEP § 2144.05(I)). Moreover, area ratios of Claim 19 and 40 are obvious because their lower range of greater than 10 and 11, respectively, and Morita's disclosed teaching of stretching 3 times in one direction and 3 times in another direction are close enough that one skilled in the art would have expected them to have the same properties (see MPEP § 2144.05(I)). Morita's film would have pores (title). Morita's average particle diameter is 0.3 to 4 μm (see Abstract), which reads on the claimed range of 0.1-1 μm . Similar to the obviousness of the claimed biaxial drawing ratio, the average particle diameter of 0.1-1 μm is obvious over Morita's average particle diameter is 0.3 to 4 μm (see Abstract) because the claimed ranges lie inside ranges disclosed by the prior art (see MPEP § 2144.05(I)). Moreover, Morita expressly teaches an average particle

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diameter of 0.5 μm (see Table 3, Example 3). The sheet would necessarily be microvoided and have a total adsorbent capacity of at least about 14 cc/m² principally because its process is the same process as claimed.

With respect to Claim 21, Morita's sheet is stretched at a temperature of $T_g + 50$ °C such as 60 °C (under 75 °C) (see col. 7, lines 35-39 and col. 10, lines 44-46).

With respect to Claim 23, Morita's average particle diameter is 0.3 to 4 μm (see Abstract), which reads on the claimed range of 0.1-0.6 μm . Similar to the obviousness of the claimed biaxial drawing ratio, the average particle diameter of 0.1-1 μm is obvious over Morita because the claimed ranges lie inside ranges disclosed by the prior art (see MPEP § 2144.05(I)). Moreover, Morita expressly teaches an average particle diameter of 0.5 μm (see Table 3, Example 3).

With respect to Claim 24, the film thickness is from 10 to 300 μm (see col. 7, lines 40-44), which reads on the claimed range of 25-400 μm .

With respect to Claim 25, Morita teaches a method of making a porous film by adding from 40-250 parts finely-powdered filler to 100 parts polylactic acid-based resin composition, which would necessarily overlap 45-75 weight % filler (see Abstract). The filler is inorganic (see col. 6, lines 28-38).

With respect to Claim 26, Morita teaches using barium sulfate, calcium carbonate, zinc oxide, titanium dioxide, and silica (see col. 6, lines 28-38).

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Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al. (US Patent No. 5,405,887) as applied to Claim 19 above, and further in view of Kanai et al. (*Film Processing*, pages 322 and 323).

With respect to Claim 29, Morita teaches the method of making film as previously described. Morita does not appear to expressly teach stretching the sheet in both directions simultaneously.

Kanai et al. teach simultaneous biaxial stretching of film (see page 322, § 6.3.2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kanai's simultaneous biaxial stretching in the process of Morita in order to have good processability and simultaneous relaxation (see page 322, § 6.3.2).

With respect to Claim 30, Morita teaches the method of making film as previously described. Morita does not appear to expressly teach stretching the sheet in a machine direction first followed by a transverse direction.

Kanai et al. teach stretching film in a machine direction first followed by a transverse direction (see page 323, Sequential Biaxial Stretching sections).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kanai's stretching film in a machine direction first followed by a transverse direction in the process of Morita in order to avoid the shortcomings of the other biaxial stretching. Specifically, simultaneous biaxial stretching is unsuitable for high-speed processing and TD then LD (transverse then

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machine direction) biaxial stretching is unsuitable for uniformly stretching wide film (see page 323, second paragraph and second-from-last paragraph).

Response to Arguments

Applicant's arguments filed 13 April 2010 have been fully considered, but they are not persuasive.

Applicant argues with respect to the 35 U.S.C. § 103(a) rejections. Applicant's arguments appear to be on the grounds that:

1) Morita does not disclose two biaxial stretching ranges. Morita only teaches a total stretching limit. Thus, Morita fails to teach a total stretching limit of greater than 10.

2) Morita is directed toward porous moisture permeable film for leakproof applications. Thus, it would have not been obvious to one of ordinary skill in the art at the time the invention was made to make the claimed absorbent permeable sheet.

The Applicant's arguments are addressed as follows:

1) Morita is relied upon for teaching stretching from 1.1 to 10 times in an axis and that stretching can be done biaxially (see col. 7, lines 28-32). Thus, the limitations discussed by Applicant of "total stretching limit" are not provided.

1) Applicant's argument that Morita only teaches a total stretching limit of 10 and that Morita therefore fails to teach a total stretching limit of greater than 10 does not contest the obviousness of Applicant's invention over Morita as recited above and on page 3 of the Office Action mailed 13 November 2009:

Moreover, area ratios of Claim 19 and 40 are obvious because their lower range of greater than 10 and 11, respectively, and Morita's disclosed teaching of

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stretching 3 times in one direction and 3 times in another direction are close enough that one skilled in the art would have expected them to have the same properties (see MPEP § 2144.05(I)).

2) The Examiner relies on Morita for all that it teaches rather than individual examples and relies on Morita's teaching of making a product that is permeable and able to absorb moisture (see col. 1, lines 18-27). Morita's teachings of making a permeable structure are acknowledged in Applicant's Arguments filed 13 April 2010 in the paragraph bridging pages numbered 6 and 7 by Applicant. Thus, Morita's teaching of being permeable and able to absorb moisture does not conflict with the claimed process of making a porous film having a total adsorbent capacity of at least about 14 cc/m².

2) Furthermore, with respect to the claimed resultant absorbency of 14 cc/m², the examiner recognizes that all of the claimed effects and physical properties are not positively stated by the reference(s). Note however that the references teach all of the claimed ingredients, process steps, and process conditions and thus, the claimed effects and physical properties would necessarily be achieved by carrying out the disclosed process. If it is applicants' position that this would not be the case: (1) evidence would need to be presented to support applicants' position; and (2) it would be the examiner's position that the application contains inadequate disclosure in that there is no teaching as to how to obtain the claimed properties and effects by carrying out only these steps.

Conclusion

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. B./
Examiner, Art Unit 1791

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791